Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_

**AP Biology – Lab Report Rubric**

Ms. Ottolini, 2013-2014

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| --- | --- | --- | --- | --- |
| **Section** | **Exceeds Expectations**  **(15 points)** | **Meets Expectations**  **(10 points)** | **Approaches Expectations**  **(5 points)** | **Does Not Meet Expectations**  **(0 points)** |
| Introduction  *(Science Practice 3)* | -The introduction is thorough, connecting the material of the course to the activity of the lab.  -The introduction provides the reader with key terms and background information.  - A logical research question is stated  -A testable hypothesis is stated in “If, then” format and communicates a cause and effect relationship between the independent and dependent variables  *(Note: a testable hypothesis must yield numeric data)*  - Independent and dependent variables, as well as constants are explicitly identified and justified  -Control groups are explicitly identified and justified | 1-2 criteria for “exceeds expectations” are missing or insufficient | 3-4 criteria for “exceeds expectations” are missing or insufficient | 5-6 criteria for “exceeds expectations” are missing or insufficient |
| Materials and Methods  *(Science Practice 4)* | -The materials list is complete  -The procedure is concisely written in paragraph form, using past tense.  -The procedure allows for the collection of relevant data to support or refute the hypothesis  -The procedure states that there will be repeated trials or data will be combined with the data from other lab groups to improve accuracy of the data  -The procedure explicitly states the levels of treatment for the independent variable and how the dependent variable will be measured (including units)  -The reader could reproduce your experiment using this procedure. | 1-2 criteria for “exceeds expectations” are missing or insufficient | 3-4 criteria for “exceeds expectations” are missing or insufficient | 5-6 criteria for “exceeds expectations” are missing or insufficient |
| Results  *(Science Practices 1 and 2)* | -Data tables, diagrams, etc. are included to show observations and measurements that are relevant to the purpose of the lab  -The data tables, diagrams, etc. are well organized and titled appropriately  - Any graphs included are labeled with a descriptive title (includes both the independent and dependent variable), appropriately labeled axes (with units), and a well-defined key (if necessary)  -Any graphs included have appropriately spaced axes with correctly placed and connected data points  - Calculations are clearly demonstrated and connected to relevant formulas (if necessary).  -Relevant statistical analysis of data is demonstrated (if necessary) | 1 criterion for “exceeds expectations” is missing or insufficient | 2 criteria for “exceeds expectations” are missing or insufficient | 3 or more criteria for “exceeds expectations” are missing or insufficient |
| Discussion and Conclusion  *(Science Practice 5)* | **Conclusions Inferred from Results:**  -There is a thorough and accurate explanation/analysis of how the data relates back to the original hypothesis  -A conclusion statement is included that states whether the data supported or refuted the original hypothesis | 1-2 criteria for “exceeds expectations” are missing or insufficient | 3-4 criteria for “exceeds expectations” are missing or insufficient | 5-6 criteria for “exceeds expectations” are missing or insufficient |
| **Possible Errors:**  -Potential sources of error are identified and discussed, and specific recommendations to address identified sources of error are given.  -Recommendations for improving the experiment by eliminating sources of error are provided. |
| **Practical Applications:**  -A clear connection is made between the lab activity and the understandings of the course.  -Suggestions for further avenues of research are provided |

**Total Points Earned:** \_\_\_\_\_ / \_\_\_\_\_